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SHOOK, HARDY & BACON L.L.P.
(c/o MICROSOFT CORPORATION)
INTELLECTUAL PROPERTY DEPARTMENT
2555 GRAND BOULEVARD
KANSAS CITY, MO 64108-2613

EXAMINER	
HERNANDEZ, NELSON D	

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/603,788	SADOVSKY ET AL.	
	Examiner	Art Unit	
	Nelson D. Hernández	2622	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 October 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18,20,23-33,35-39,41 and 42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18,20,23-33,35-39,41 and 42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 June 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Please note that the Examiner on record has changed. All future correspondence should be directed to Nelson D. Hernandez whose information is provided at the end of this Office Action.

Response to Amendment

2. The Examiner acknowledges the amended claims filed on October 12, 2007. **Claims 1, 4, 12, 20, 29, 35 and 41** have been amended. **Claims 19, 21, 22, 34 and 40** have been canceled.

Response to Arguments

3. Applicant's arguments with respect to claims **1-18, 20, 23-33, 35-39, 41 and 42** have been considered but are moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. **Claims 11 and 28** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Regarding claim 11, claim 11 recites "A computer-readable medium having computer-executable instructions for performing the method recited in claim 1". "A

computer readable medium" as claimed does not define structural and functional interrelationships between the data structure, the computer software and hardware components, which permit the data structure to be realized. What is the interrelationship between the computer readable medium, the computer-executable instructions, the computer and the image capturing device? Since computer-executable instructions are merely set of instructions capable of being executed by a computer or another device, the program logic itself is not a process; therefore the invention as claimed is non-statutory.

Regarding claim 28, claim 28 recites "A computer-readable medium having computer-executable instructions for performing the method recited in claim 20". "A computer readable medium" as claimed does not define structural and functional interrelationships between the data structure, the computer software and hardware components, which permit the data structure to be realized. What is the interrelationship between the computer readable medium, the computer-executable instructions, the computer and the image capturing device? Since computer-executable instructions are merely set of instructions capable of being executed by a computer or another device, the program logic itself is not a process; therefore the invention as claimed is non-statutory.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-18, 20, 23-33, 35-39, 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker et al., US 2004/0174434 A1 in view of Bolle et al. US Patent 6,301,440 B1 and further in view of Iida, US 2003/0231241 A1.

Regarding claim 1, Walker et al. discloses a method for optimizing an image capturing device (camera 130) in order to improve image quality, the method comprising collecting data related to a captured image from the image capturing device (130) and storing the data externally (in server 1 I0) from the image capturing device, comparing the collected data to previously stored data ("template" images stored in memory of server 110), and determining adjustments for optimizing the image capturing device based on the comparison (Figs. 1-4, page ¶ 0023-0058; and ¶ 0318-0333. Walker et al. also teaches that the adjustments for optimizing the image capturing device can be automatically made when the user does not reply to a posed question, as shown in ¶ 0471. Walker also discloses aggregating image metadata associated with the image capturing device (as taught in fig. 8 and ¶ 0117-0119, Walker et al. teaches that the template image, which can be determined using metadata from a captured image (i.e. camera settings at time of capture), is used to provide the camera with optimal settings for a given environment or situation by using information from variety of previously

captured images. In this respect, the Examiner believes that such use of a plurality of previously captured images amounts to an "accumulated usage pattern"; see also ¶ 0600-0606).

Walker et al. does not explicitly teach, however, that the adjustments for optimizing the image capturing device are made automatically without prompting a user; and providing a third-party manufacturer of the image capturing device with a set of usage statistics based on the aggregated image metadata.

However, Bolle et al. teaches a method of optimizing an image capturing device (camera) in order to improve image quality by collecting data related to a captured image (a "temporary image")from an image capturing device, comparing the collected data to previously stored data (in photographic expert unit 104), and either prompting the user to set determined adjustments for optimizing the image capturing device based on the comparison (i.e." guided mode"), or automatically determining adjustments, without prompting a user, for optimizing the image capturing device based on the comparison (i.e. "fully automatic mode") (Fig. 1, col. 2, lines 14-44, col. 2, line 62 - col. 3, line 21, and col. 6, lines 23-67).

Therefore, taking the combined teaching of Walker et al. in view of Bolle et al. as a whole, it would have been obvious to one of an ordinary skill in the art at the time the invention was made to have incorporated the automatic determination of adjustments without the prompting of a user, as taught by Bolle et al., with the method for optimizing an image capturing device disclosed by Walker et al. One would have been motivated to do so because, as taught by Bolle et al. in col. 1, line 14 - col. 2, line 10, a novice

user of the image capturing device is often overwhelmed by the various camera settings and adjustments available to them, and thus an automatic determination of adjustments enables the user to capture an expert-quality image without having to make manual adjustments that may adversely alter the captured image.

The combined teaching of Walker et al. in view of Bolle et al. fails to teach providing a third-party manufacturer of the image capturing device with a set of usage statistics based on the aggregated image metadata.

However, Iida teaches an image forming system comprising a camera (60) that though a order receiving center (12) send image data to a processing center (14) to be processed based on user's requests, wherein said processing center is connected to a network to communicate with a data center (16) and to camera manufacturers (16) in order to receive advice information based on the image data received by the different devices (See figs. 3-6, 8-10; ¶ 0081-0085, ¶0089-0113). Iida also teaches the use of EXIF-format to store information related to the image capturing device (¶ 0083-0085, ¶ 0094, ¶ 0108; this teaches the use of metadata to store image capturing device information to the image file), wherein the camera manufacturer (18) receives information as the type of camera, shot time number (number of image files) and other information that would allow the camera manufacturer (18) to determine number of customers using cameras manufactured by their company, shot image number, shooting frequency for individual customers and information useful for the development of future camera products, this would allow the camera manufacturer to recommend to the users to exchange or replace certain camera components though the order

receiving center 12 (See ¶ 0096) (This teaches providing a third-party manufacturer of the image capturing device with a set of usage statistics based on the aggregated image metadata).

Therefore, taking the combined teaching of Walker et al. in view of Bolle et al. and further in view of Iida as a whole, it would have been obvious to one of an ordinary skill in the art at the time the invention was made to have incorporated the teaching of providing a third-party manufacturer of the image capturing device with a set of usage statistics based on the aggregated image metadata, as taught by Iida with the method for optimizing an image capturing device disclosed by Walker et al. and Bolle et al. One would have been motivated to do so because, as taught by Iida, the information sent to the camera manufacture would becomes useful for the development of future products and the manufacturers can formulate plans for manufacturing and storage of time-change components (See ¶ 0037, ¶ 0096).

Regarding claim 2, limitations can be found in claim 1. Furthermore, Walker et al. further discloses that the determined adjustments are forwarded to a user interface (output devices 540) for user evaluation (¶ 0089; ¶ 0466-0470, and ¶ 0484-0486.

Regarding claim 3, limitations can be found in claim 1. Furthermore, Walker et al. also teaches that the adjustments to the image-capturing device (130) are automatically made in ¶ 0471. Also, Bolle et al. teaches that the adjustments are automatically made in col. 2, lines 14-44, col. 2, line 62 - col. 3, line 21, and col. 6, lines 23-67.

Regarding claim 4, limitations can be found in claim 1 above. Furthermore, Walker et al. further discloses that the comparing of data to previously stored data (template images) comprises performing metadata analysis, as is taught in fig. 8 and ¶ 0117-0119. Further, Walker et al. teaches that the template image, which can be determined using metadata from a captured image (i.e. camera settings at time of capture), is used to provide the camera with optimal settings for a given environment or situation by using information from variety of previously captured images. In this respect, the Examiner believes that such use of a plurality of previously captured images amounts to an "accumulated usage pattern", and that the server of Walker et al. provides "intelligent help" by automatically applying the optimal settings associated with the template image to the camera in image-capture situations determined to be similar to those in the template images (See ¶ 0600-0606). Further, the Iida reference teaches that the accumulated usage pattern includes a set of analyzed and aggregated information of typical usage for the image capturing device (the type of camera, shot time number (number of image files) and other information that would allow the camera manufacturer (18) to determine number of customers using cameras manufactured by their company, shot image number, shooting frequency for individual customers and information useful for the development of future camera products; see ¶ 0096).

Regarding claim 5, limitations can be found in claim 1 above. Furthermore, Walker et al. also teaches that comparing the data to previously stored data comprises performing pattern analysis (e.g. indoors or lighting patterns), as disclosed in ¶ 0319-0333.

Regarding claim 6, limitations can be found in claim 1 above. Furthermore, Walker et al. further discloses that comparing the data to previously stored data comprises performing device setting analysis, as taught in ¶ 0105-0112.

Regarding claim 7, Walker et al. in view of Bolle et al. and further in view of Iida teaches the limitations in claim 1, and Walker et al. also discloses that help topics (e.g. describing a potential adjustment to a setting) are presented to a user interface, as described in ¶ 0569. Bolle et al. also teaches a "guided mode" that prompts the user to choose a variety of reasonable settings in col. 2, lines 14-44.

Regarding claim 8, limitations can be found in claim 1 above (Fig. 4 and ¶ 0069,0073 on Walker et al. teach that the method further comprises collecting data through a connectivity layer (processor 405) and making changes to image capturing device settings thought the connectivity layer (based upon the changes made via program 415).

Regarding claim 9, limitations can be found in claim 8 above, and ¶ 0326-0333 further show that the collected data (i.e. captured image data) is sent to an image and context analysis manager (template database) for analysis.

Considering claim 10, limitations can be found in claim 9 above, and Walker et al. teaches that a real time wireless connection is maintained between the image capture device and the connectivity layer (405) in ¶ 0033 and Fig. 1.

Regarding claim 11, the method of claim 1 is set forth above by Walker et al. in view of Bolle et al. Walker et al. further discloses a computer-readable medium

(memory 410) having computer-executable instructions (program 415) for performing the above method, as is taught in Fig. 4 and ¶ 0070-0071.

Regarding claim 12, Walker et al. discloses a system for optimizing an image capturing device (camera 130) in order to improve image quality, the system comprising a data collection apparatus for collecting data related to a captured image from the image capturing device and sending the data to a storage device (in server 110), data analysis tools for comparing the captured data to previously stored' data (template images), and optimization tools for optimizing the image capturing device based on the data analysis (Figs. 1-4, ¶ 0023-0058, and ¶ 0318-0333). Walker et al. also teaches that the adjustments for optimizing the image capturing device can be automatically made when the user does not reply to a posed question (¶ 0471).

Walker et al. does not explicitly teach that the adjustments for optimizing the image capturing device are made automatically without prompting a user; and a data aggregating and uploading manager for facilitating maintenance of a set of usage statistics, the data aggregating and uploading manager configured to aggregate image metadata associated with the image capturing device and further configured to provide a third-part manufacturer of the image capturing device with the set of usage statistics, the set of usage statistics based on the aggregated image metadata.

However, the Bolle et al. reference teaches a system of optimizing an image capturing device (camera) in order to improve image quality by collecting data related to a captured image (a "temporary image") from an image capturing device, comparing the collected data to previously stored data (in photographic expert unit 104), and either

prompting the user to set determined adjustments for optimizing the image capturing device based on the comparison (i.e. "guided mode"), or automatically determining adjustments, without prompting a user, for optimizing the image capturing device based on the comparison (i.e. "fully automatic mode") (See Fig. 1, col. 2, lines 14-44, col. 2, line 62 - col. 3, line 21, and col. 6, lines 23-67).

Therefore, taking the combine teaching of Walker et al. in view of Bolle et al. as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the automatic determination of adjustments without the prompting of a user, as taught by Bolle et al., with the system for optimizing an image capturing device disclosed by Walker et al.. One would have been motivated to do so because, as taught by Bolle et al. in col. 1, line 14 - col. 2, line 10, a novice user of the image capturing device is often overwhelmed by the various camera settings and adjustments available to them, and thus an automatic determination of adjustments enables the user to capture an expert-quality image without having to make manual adjustments that may adversely alter the captured image.

The combine teaching of Walker et al. in view of Bolle et al. fails to teach a data aggregating and uploading manager for facilitating maintenance of a set of usage statistics, the data aggregating and uploading manager configured to aggregate image metadata associated with the image capturing device and further configured to provide a third-part manufacturer of the image capturing device with the set of usage statistics, the set of usage statistics based on the aggregated image metadata.

However, Iida teaches an image forming system comprising a camera (60) that though a order receiving center (12) send image data to a processing center (14) to be processed based on user's requests, wherein said processing center is connected to a network to communicate with a data center (16) and to camera manufacturers (16) in order to receive advice information based on the image data received by the different devices (See figs. 3-6, 8-10; ¶ 0081-0085, ¶0089-0113). Iida also teaches the use of EXIF-format to store information related to the image capturing device (¶ 0083-0085, ¶ 0094, ¶ 0108; this teaches the use of metadata to store image capturing device information to the image file), wherein the camera manufacturer (18) receives information as the type of camera, shot time number (number of image files) and other information from the order receiving center (this teaches the use of a data aggregating and uploading manager for facilitating maintenance of a set of usage statistics that is used to provide information related to the usage of the camera to a manufacturer of the camera, wherein said information can be from the image EXIF file or from the order receiving center (12)) that would allow the camera manufacturer (18) to determine number of customers using cameras manufactured by their company, shot image number, shooting frequency for individual customers and information useful for the development of future camera products, this would allow the camera manufacturer to recommend to the users to exchange or replace certain camera components though the order receiving center 12 (See ¶ 0096) (This teaches providing a third-party manufacturer of the image capturing device with a set of usage statistics based on the aggregated image metadata).

Therefore, taking the combined teaching of Walker et al. in view of Bolle et al. and further in view of lida as a whole, it would have been obvious to one of an ordinary skill in the art at the time the invention was made to have incorporated a data aggregating and uploading manager for facilitating maintenance of a set of usage statistics, the data aggregating and uploading manager configured to aggregate image metadata associated with the image capturing device and further configured to provide a third-part manufacturer of the image capturing device with the set of usage statistics, the set of usage statistics based on the aggregated image metadata, as taught by lida with the method for optimizing an image capturing device disclosed by Walker et al. and Bolle et al. One would have been motivated to do so because, as taught by lida, the information sent to the camera manufacture would becomes useful for the development of future products and the manufacturers can formulate plans for manufacturing and storage of time-change components (See ¶ 0037, ¶ 0096).

Regarding claim 13, limitations can be found in claim 12 above, and Walker et al. further discloses that the data collection apparatus comprises a connectivity layer (processor 405) operable for sending image-related data to the data analysis tools, as is taught in Fig. 4 and ¶ 0069-0073.

Regarding claim 14, limitations can be found in claim 12 above, Walker et al. teaches that the data analysis tools comprise and image and context analysis manager (template databases), as is taught in ¶ 0326-0333.

Regarding claim 15, the limitations of claim 14 are taught by Walker et al. in view of Bolle et al. and further in view of lida above, and Walker et al. discloses that the

image and context analysis manager comprises a plurality of filters (plurality of databases in memory 410) for processing and analyzing different types of image-related data, as shown in Fig. 4 and ¶ 0075.

Regarding claim 16, limitations can be found in claim 15 above, and Walker et al. teaches that the filters comprise an image analysis filter (image database 425), a device settings and context analysis filter (settings database 420), and a usage and pattern analysis filter (event log 450) (Fig. 4 and ¶ 0075).

Regarding claim 17, Walker et al. in view of Bolle et al. in view of Iida teaches the limitations of claim 12, and Walker et al. further teaches that the optimization tools comprise a user interface (output devices 540) for providing instructions and recommendations to the user for improving image quality. See ¶ 0089, ¶ 0466-0470, and ¶ 0484-0486. Bolle et al. also teaches a "guided mode" that prompts the user to choose a variety of reasonable settings in col. 2, lines 14-44.

Regarding claim 18, limitations can be found in claim 12 above, and Walker et al. teaches that the optimization tools comprise core services and a connectivity layer (405) for sending adjustments directly to the image capturing device, as taught in ¶ 0471.

Regarding claim 20, Walker et al. discloses a method for analyzing captured images, the method comprising collecting data related to a newly captured image from the image capturing device (130), wherein the data includes image quality data and context data, comparing the collected data to previously stored data ("template" images stored in memory of server 110) to determine a deviation from ideal image quality data

and comparing context data for the newly captured image to stored context data, and determining adjustments for optimizing the image Capturing device to improve image quality based on the comparison. Please refer to Figs. 1-4, ¶ 0023-0058, and ¶ 0318-0333. Walker et al. also teaches that the adjustments for optimizing the image capturing device can be automatically made when the user does not reply to a posed question, as shown in ¶ 0471. Further, Walker et al. teaches forwarding the determined adjustments to a user interface for user evaluation (Walker et al. teaches that the determined adjustments are forwarded to a user interface (output devices 540) for user evaluation. See ¶ 0089, ¶ 0466-0470, and ¶ 0484-0486).

Walker et al. does not explicitly teach, however, that the adjustments for optimizing the image capturing device are made automatically without prompting a user; aggregating image metadata associated with the image capturing device; providing a third-party manufacturer of the image capturing device with a set of usage statistics based on the aggregated image metadata; and automatically making the adjustments to the image capturing device.

However, Bolle et al. teaches a method of optimizing an image capturing device (camera) in order to improve image quality by collecting data related to a Captured image (a "temporary image") from an image capturing device, comparing the collected data to previously stored data (in photographic expert unit 104), and either prompting the user to set determined adjustments for optimizing the image capturing device based on the comparison (i.e. "guided mode"), or automatically determining adjustments, without prompting a user, for optimizing the image capturing device based on the

comparison (i.e. "fully automatic mode"). Bolle et al. further teaches automatically making the adjustments to the image capturing device (Bolle et al. also teaches a "guided mode" that prompts the user to choose a variety of reasonable settings in col. 2, lines 14-44) (See Fig. 1, col. 2, lines 14-44, col. 2, line 62 - col. 3, line 21, and col. 6, lines 23-67).

Therefore, taking the combined teaching of Walker et al. in view of Bolle et al. as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the automatic determination of adjustments without the prompting of a user and automatically making the adjustments to the image capturing device, as taught by Bolle et al, with the method for optimizing an image capturing device disclosed by Walker et al. One would have been motivated to do so because; as taught by Bolle et al. in col. 1, line 14 - col. 2, line 10, a novice user of the image capturing device is often overwhelmed by the various camera settings and adjustments available to them, and thus an automatic determination of adjustments enables the user to capture an expert-quality image without having to make manual adjustments that may adversely alter the captured image.

The combined teaching of Walker et al. in view of Bolle et al. fails to teach providing a third-party manufacturer of the image capturing device with a set of usage statistics based on the aggregated image metadata; and automatically making the adjustments to the image capturing device.

However, Iida teaches an image forming system comprising a camera (60) that though a order receiving center (12) send image data to a processing center (14) to be

processed based on user's requests, wherein said processing center is connected to a network to communicate with a data center (16) and to camera manufacturers (16) in order to receive advice information based on the image data received by the different devices (See figs. 3-6, 8-10; ¶ 0081-0085, ¶0089-0113). Iida also teaches the use of EXIF-format to store information related to the image capturing device (¶ 0083-0085, ¶ 0094, ¶ 0108; this teaches the use of metadata to store image capturing device information to the image file), wherein the camera manufacturer (18) receives information as the type of camera, shot time number (number of image files) and other information that would allow the camera manufacturer (18) to determine number of customers using cameras manufactured by their company, shot image number, shooting frequency for individual customers and information useful for the development of future camera products, this would allow the camera manufacturer to recommend to the users to exchange or replace certain camera components though the order receiving center 12 (See ¶ 0096) (This teaches providing a third-party manufacturer of the image capturing device with a set of usage statistics based on the aggregated image metadata).

Therefore, taking the combined teaching of Walker et al. in view of Bolle et al. and further in view of Iida as a whole, it would have been obvious to one of an ordinary skill in the art at the time the invention was made to have incorporated the teaching of providing a third-party manufacturer of the image capturing device with a set of usage statistics based on the aggregated image metadata, as taught by Iida with the method for optimizing an image capturing device disclosed by Walker et al. and Bolle et al. One

would have been motivated to do so because, as taught by Iida, the information sent to the camera manufacture would becomes useful for the development of future products and the manufacturers can formulate plans for manufacturing and storage of time-change components (See ¶ 0037, ¶ 0096).

Regarding claim 23, again the limitations of claim 20 are taught above, and Walker et al. also teaches that comparing the context data to previously stored context data (in databases) comprises performing device setting analysis (via settings database 420), as shown in fig. 4 and ¶ 0075.

Regarding claim 24, Walker et al. in view of Bolle et al teaches the limitations of claim 20 above, and the method further comprises presenting help topics to a user interface (via questions presented to the user on the camera LCD), an example of which is disclosed in ¶ 0126-0201 in Walker et al. Bolle et al. also teaches a "guided mode" that prompts the user to choose a variety of reasonable settings in col. 2, lines 14-44.

Regarding claim 25, limitations can be found in claim 20 above, and Fig. 4 and ¶ 0069- 0073 in Walker et al. teaches that the method further comprises collecting data through a connectivity layer (processor 405) and making changes to image capturing device settings thought the connectivity layer (based upon the changes made via program 415).

Regarding claim 26, the Walker et al. in view of Bolle et al. and further in view of Iida combination teaches the limitations of claim 25 above, and Walker further teaches that the method further comprises sending the collected data (i.e. captured image data)

to an image and context analysis manager (template database) for analysis. Please refer to ¶ 0326-0333.

Regarding claim 27, the limitations of claim 26 are set forth above, and Walker discloses that a real time wireless connection is maintained between the image capture device and the Connectivity layer (405) in ¶ 0033 and Fig. 1.

Regarding claim 28, the method of claim 20 is taught above, and Walker further discloses a computer-readable medium (memory 410) having computer-executable instructions (program 415) for performing the above method, as is taught in Fig. 4 and ¶ 0070-0071.

Regarding claim 29, Walker et al. discloses a system for optimizing an image capturing device in order to improve image quality, the system comprising a data collection apparatus for collecting data related to a captured image from the image capturing device and sending the data to a storage device (in server 110), image data analysis tools for comparing the captured data to previously stored data (template images), device and context analysis tools (settings database) for comparing current context data with stored context data and for sending the context data to the storage device, and optimization tools for optimizing the image capturing device based on the data analysis (Figs. 1-4,¶ 0023-0058, and ¶ 0318-0333). Walker et al also teaches that the adjustments for optimizing the image capturing device can be automatically made when the user does not reply to a posed question, as shown in ¶ 0471. Walker also discloses aggregating image metadata associated with the image capturing device (as taught in fig. 8 and ¶ 0117-0119, Walker et al. teaches that the template image, which

can be determined using metadata from a captured image (i.e. camera settings at time of capture), is used to provide the camera with optimal settings for a given environment or situation by using information from variety of previously captured images. In this respect, the Examiner believes that such use of a plurality of previously captured images amounts to an "accumulated usage pattern"; see also ¶ 0600-0606).

Walker et al. does not explicitly teach that the adjustments for optimizing the image capturing device are made automatically without prompting a user; and a data aggregating and uploading manager for facilitating maintenance of a set of usage statistics, the data aggregating and uploading manager configured to aggregate image metadata associated with the image capturing device and further configured to provide a third-part manufacturer of the image capturing device with the set of usage statistics, the set of usage statistics based on the aggregated image metadata.

However, Bolle et al. teaches a system of optimizing an image capturing device (camera) in order to improve image quality by collecting data related to a captured image (a "temporary image") from an image capturing device, comparing the collected data to previously stored data (in photographic expert unit 104), and either prompting the user to set determined adjustments for optimizing the image capturing device based on the comparison (i.e. "guided mode"), or automatically determining adjustments, without prompting a user, for optimizing the image capturing device based on the comparison (i.e. "fully automatic mode") (Fig. 1, col. 2, lines 14-44, col. 2, line 62 - col. 3, line 21, and col. 6, lines 23-67).

Therefore, taking the combined teaching of Walker et al in view of Bolle et al. as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the automatic determination of adjustments without the prompting of a user, as taught by Bolle et al., with the system for optimizing an image capturing device disclosed by Walker et al. One would have been motivated to do so because, as taught by Bolle et al. in col. 1, line 14 - col. 2, line 10, a novice user of the image capturing device is often overwhelmed by the various camera settings and adjustments available to them, and thus an automatic determination of adjustments enables the user to capture an expert-quality image without having to make manual adjustments that may adversely alter the captured image.

The combine teaching of Walker et al. in view of Bolle et al. fails to teach a data aggregating and uploading manager for facilitating maintenance of a set of usage statistics, the data aggregating and uploading manager configured to aggregate image metadata associated with the image capturing device and further configured to provide a third-part manufacturer of the image capturing device with the set of usage statistics, the set of usage statistics based on the aggregated image metadata.

However, Iida teaches an image forming system comprising a camera (60) that though a order receiving center (12) send image data to a processing center (14) to be processed based on user's requests, wherein said processing center is connected to a network to communicate with a data center (16) and to camera manufacturers (16) in order to receive advice information based on the image data received by the different devices (See figs. 3-6, 8-10; ¶ 0081-0085, ¶0089-0113). Iida also teaches the use of

EXIF-format to store information related to the image capturing device (¶ 0083-0085, ¶ 0094, ¶ 0108; this teaches the use of metadata to store image capturing device information to the image file), wherein the camera manufacturer (18) receives information as the type of camera, shot time number (number of image files) and other information from the order receiving center (this teaches the use of a data aggregating and uploading manager for facilitating maintenance of a set of usage statistics that is used to provide information related to the usage of the camera to a manufacturer of the camera, wherein said information can be from the image EXIF file or from the order receiving center (12)) that would allow the camera manufacturer (18) to determine number of customers using cameras manufactured by their company, shot image number, shooting frequency for individual customers and information useful for the development of future camera products, this would allow the camera manufacturer to recommend to the users to exchange or replace certain camera components though the order receiving center 12 (See ¶ 0096) (This teaches providing a third-party manufacturer of the image capturing device with a set of usage statistics based on the aggregated image metadata).

Therefore, taking the combined teaching of Walker et al. in view of Bolle et al. and further in view of Iida as a whole, it would have been obvious to one of an ordinary skill in the art at the time the invention was made to have incorporated a data aggregating and uploading manager for facilitating maintenance of a set of usage statistics, the data aggregating and uploading manager configured to aggregate image metadata associated with the image capturing device and further configured to provide

a third-part manufacturer of the image capturing device with the set of usage statistics, the set of usage statistics based on the aggregated image metadata, as taught by Iida with the method for optimizing an image capturing device disclosed by Walker et al. and Bolle et al. One would have been motivated to do so because, as taught by Iida, the information sent to the camera manufacture would becomes useful for the development of future products and the manufacturers can formulate plans for manufacturing and storage of time-change components (See ¶ 0037, ¶ 0096).

Regarding claim 30, limitations can be found in claim 29 above, Walker et al. further teaches that the data collection apparatus comprises a connectivity layer (processor 405) operable for sending image-related data to the image data analysis tools and context data to the device and context analysis tools, as is taught in fig. 4 and ¶ 0069-0073.

Regarding claim 31, limitations can be found in claim 29 above, and Walker et al. teaches that the system further comprises a usage and pattern analysis filter (event log 450) (Fig. 4 and ¶ 0075).

Regarding claim 32, Walker et al. teaches the limitations in claim 29, and the Walker reference further discloses that the optimization tools comprise a user interface (output devices 540) for providing instructions and recommendations to the user for improving image quality. See ¶ 0089, ¶ 0466-0470, and ¶ 0484-0486. Bolle et al. also teaches a "guided mode" that prompts the user to choose a variety of reasonable settings in col. 2, lines 14-44.

Regarding claim 33, limitations can be found in claim 29 above, and the Walker reference teaches that the optimization tools comprise core services and a connectivity layer (405) for sending adjustments directly to the image capturing device, as taught in ¶ 0471.

Regarding claim 35, Walker et al. discloses a system for improving the quality of images captured by an image capturing device, the system comprising image analysis filters (image database 425) for deducing image metadata (as shown in Fig. 8) from collected image bits and for recording the image metadata, device settings and context analysis filters (settings database 420) for analyzing device settings and contexts during image capture, and means for determining appropriate corrective measures based on the deduced image metadata, device settings and context analysis, and historical data. Please refer to Figs. 1-4, ¶ 0023-0058, and ¶ 0318-0333. Walker also teaches that the adjustments for optimizing the image capturing device can be automatically made when the user does not reply to a posed question, as shown in ¶ 0471.

Walker et al. does not explicitly teach, however, that the adjustments for optimizing the image capturing device are made automatically without prompting a user; and a data aggregating and uploading manager for facilitating maintenance of a set of usage statistics, the data aggregating and uploading manager configured to aggregate image metadata associated with the image capturing device and further configured to provide a third-part manufacturer of the image capturing device with the set of usage statistics, the set of usage statistics based on the aggregated image metadata.

However, Bolle et al. teaches a system of optimizing an image capturing device (camera) in order to improve image quality by collecting data related to a captured image (a "temporary image") from an image capturing device, comparing the collected data to previously stored data (in photographic expert unit 104), and either prompting the user to set determined adjustments for optimizing the image capturing device based on the comparison (i.e. "guided mode"), or automatically determining adjustments, without prompting a user, for optimizing the image capturing device based on the comparison (i.e. "fully automatic mode"). Please refer to fig. 1, col. 2, lines 14-44, col. 2, line 62 - col. 3, line 21, and col. 6, lines 23-67.

Therefore, taking the combined teaching of Walker et al. in view of Bolle et al. as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the automatic determination of adjustments without the prompting of a user, as taught by Bolle et al., with the system for optimizing an image capturing device disclosed by Walker et al. One would have been motivated to do so because as taught by Bolle et al. in col. 1, line 14 - col. 2, line 10, a novice user of the image capturing device is often overwhelmed by the various camera settings and adjustments available to them, and thus an automatic determination of adjustments enables the user to capture an expert-quality image without having to make manual adjustments that may adversely alter the captured image.

The combine teaching of Walker et al. in view of Bolle et al. fails to teach a data aggregating and uploading manager for facilitating maintenance of a set of usage statistics, the data aggregating and uploading manager configured to aggregate image

metadata associated with the image capturing device and further configured to provide a third-part manufacturer of the image capturing device with the set of usage statistics, the set of usage statistics based on the aggregated image metadata.

However, Iida teaches an image forming system comprising a camera (60) that though a order receiving center (12) send image data to a processing center (14) to be processed based on user's requests, wherein said processing center is connected to a network to communicate with a data center (16) and to camera manufacturers (16) in order to receive advice information based on the image data received by the different devices (See figs. 3-6, 8-10; ¶ 0081-0085, ¶0089-0113). Iida also teaches the use of EXIF-format to store information related to the image capturing device (¶ 0083-0085, ¶ 0094, ¶ 0108; this teaches the use of metadata to store image capturing device information to the image file), wherein the camera manufacturer (18) receives information as the type of camera, shot time number (number of image files) and other information from the order receiving center (this teaches the use of a data aggregating and uploading manager for facilitating maintenance of a set of usage statistics that is used to provide information related to the usage of the camera to a manufacturer of the camera, wherein said information can be from the image EXIF file or from the order receiving center (12)) that would allow the camera manufacturer (18) to determine number of customers using cameras manufactured by their company, shot image number, shooting frequency for individual customers and information useful for the development of future camera products, this would allow the camera manufacturer to recommend to the users to exchange or replace certain camera components though the

order receiving center 12 (See ¶ 0096) (This teaches providing a third-party manufacturer of the image capturing device with a set of usage statistics based on the aggregated image metadata).

Therefore, taking the combined teaching of Walker et al. in view of Bolle et al. and further in view of Iida as a whole, it would have been obvious to one of an ordinary skill in the art at the time the invention was made to have incorporated a data aggregating and uploading manager for facilitating maintenance of a set of usage statistics, the data aggregating and uploading manager configured to aggregate image metadata associated with the image capturing device and further configured to provide a third-part manufacturer of the image capturing device with the set of usage statistics, the set of usage statistics based on the aggregated image metadata, as taught by Iida with the method for optimizing an image capturing device disclosed by Walker et al. and Bolle et al. One would have been motivated to do so because, as taught by Iida, the information sent to the camera manufacture would becomes useful for the development of future products and the manufacturers can formulate plans for manufacturing and storage of time-change components (See ¶ 0037, ¶ 0096).

Regarding claim 36, limitations can be found in claim 35 above, and Walker et al. further teaches the data collection apparatus comprises a connectivity layer (processor 405) operable for sending image- related data to the image analysis filters and the device setting and session context analysis filters, as is taught in fig. 4 and ¶ 0069-0073.

Regarding claim 37, limitations can be found in claim 35 above, and Walker et al. discloses that the system further comprises a usage and pattern analysis filter (event log 450) (Fig. 4 and ¶ 0075).

Regarding claim 38, Walker et al. in view of Bolle et al. teaches the limitations of claim 35, and the Walker reference further discloses that the means for determining appropriate corrective measures comprise a user interface (output devices 540) for providing instructions and recommendations to the user for improving image quality. See ¶ 0089, ¶ 0466-0470, and 0484-0486.

Regarding claim 39, limitations can be found in claim 35 above, and the Walker et al. teaches that the means for determining appropriate corrective measures comprise core services and a connectivity layer (405) for sending adjustments directly to the image capturing device, as taught in ¶ 0471.

8. Claims 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker et al. US 2004/0174434 A1 and Bolle et al., US Patent 6,301,440 B1 in view of Kiyokawa, US Patent 6,636,260 B2 and further in view of Iida, US 2003/0231241 A1.

Regarding claim 41, the Walker reference teaches a method for analyzing a method for optimizing an image capturing device (camera 130) in order to improve image quality, the method comprising collecting data related to a captured image from the image capturing device (130) and storing the data externally (in server 110) from the image capturing device, comparing the collected data to previously stored data

("template" images stored in memory of server 110), and determining adjustments for optimizing the image capturing device based on the comparison (See Figs. 1-4, ¶ 0023-0058, and ¶ 0318-0333). Walker also teaches that the adjustments for optimizing the image capturing device can be automatically made when the user does not reply to a posed question, as shown in ¶ 0471. Walker also discloses aggregating image metadata associated with the image capturing device (as taught in fig. 8 and ¶ 0117-0119, Walker et al. teaches that the template image, which can be determined using metadata from a captured image (i.e. camera settings at time of capture), is used to provide the camera with optimal settings for a given environment or situation by using information from variety of previously captured images. In this respect, the Examiner believes that such use of a plurality of previously captured images amounts to an "accumulated usage pattern"; see also ¶ 0600-0606).

Walker et al. does not explicitly teach, however, that the adjustments for optimizing the image capturing device are made automatically without prompting a user; that the adjustments for optimizing the image capturing device are made automatically without prompting a user, and further that the method involves a multimedia object (e.g. a video or audio object); and providing a third-party manufacturer of the image capturing device with a set of usage statistics based on the aggregated image metadata.

However, Bolle et al. teaches a method of optimizing an image capturing device (camera) in order to improve image quality by collecting data related to a captured image (a "temporary image") from an image capturing device, comparing the collected data to previously stored data (in photographic expert unit 104), and either prompting

the user to set determined adjustments for optimizing the image capturing device based on the comparison (i.e. "guided mode"), or automatically determining adjustments, without prompting a user, for optimizing the image capturing device based on the comparison (i.e. "fully automatic mode") (See fig. 1, col. 2, lines 14-44, col. 2, line 62 - col. 3, line 21, and col. 6, lines 23-67). Further, referring to the Kiyokawa reference, Kiyokawa teaches a digital video camera (11) wherein multimedia objects (video objects) are captured and compared with quality data (in this case, color matching data) of previously stored multimedia data (stored in external storage 14), wherein adjustments to the data are made based on the comparison (See col. 3, line 65 - col. 4, line 47).

Therefore, taking the combined teaching of Walker et al. in view of Bolle et al. and further in view of Kiyokawa as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the automatic determination of adjustments without the prompting of a user, as taught by Bolle et al, as well as the multimedia data comparison of Kiyokawa, with the method for optimizing an image capturing device disclosed by Walker et al. One would have been motivated to do so because, as taught by Bolle in col. 1, line 14 - col. 2, line 10, a novice user of the image capturing device is often overwhelmed by the various camera settings and adjustments available to them, and thus an automatic determination of adjustments enables the user to capture an expert-quality image without having to make manual adjustments that may adversely alter the captured image. Also, regarding the capture of multimedia objects, cameras that capture both moving and still images can

be optimized based on previously captured data, as opposed to analyzing and correcting (or recommending correction) still image data but not analyzing motion image data. The user will thus obtain both expert-quality still and moving images.

The combined teaching of Walker et al. in view of Bolle et al. and further in view of Kiyokawa fails to teach providing a third-party manufacturer of the image capturing device with a set of usage statistics based on the aggregated image metadata.

However, Iida teaches an image forming system comprising a camera (60) that though a order receiving center (12) send image data to a processing center (14) to be processed based on user's requests, wherein said processing center is connected to a network to communicate with a data center (16) and to camera manufacturers (16) in order to receive advice information based on the image data received by the different devices (See figs. 3-6, 8-10; ¶ 0081-0085, ¶0089-0113). Iida also teaches the use of EXIF-format to store information related to the image capturing device (¶ 0083-0085, ¶ 0094, ¶ 0108; this teaches the use of metadata to store image capturing device information to the image file), wherein the camera manufacturer (18) receives information as the type of camera, shot time number (number of image files) and other information that would allow the camera manufacturer (18) to determine number of customers using cameras manufactured by their company, shot image number, shooting frequency for individual customers and information useful for the development of future camera products, this would allow the camera manufacturer to recommend to the users to exchange or replace certain camera components though the order receiving center 12 (See ¶ 0096) (This teaches providing a third-party manufacturer of

the image capturing device with a set of usage statistics based on the aggregated image metadata).

Therefore, taking the combined teaching of Walker et al. and Bolle et al. in view of Kiyokawa and further in view of Iida as a whole, it would have been obvious to one of an ordinary skill in the art at the time the invention was made to have incorporated the teaching of providing a third-party manufacturer of the image capturing device with a set of usage statistics based on the aggregated image metadata, as taught by Iida with the method for optimizing an image capturing device disclosed by Walker et al., Bolle et al. and Kiyokawa One would have been motivated to do so because, as taught by Iida, the information sent to the camera manufacture would becomes useful for the development of future products and the manufacturers can formulate plans for manufacturing and storage of time-change components (See ¶ 0037, ¶ 0096).

Regarding claim 42, the limitations of claim 41 are set forth above, and Kiyokawa further discloses that the captured multimedia object comprises a video object in col. 4, lines 6-13.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nelson D. Hernández whose telephone number is (571) 272-7311. The examiner can normally be reached on 9:30 A.M. to 6:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on (571) 272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nelson D. Hernández
Examiner
Art Unit 2622

NDHH
December 27, 2007

LIN YE
SUPERVISORY PATENT EXAMINER